

**WHAT IS CLAIMED IS:**

1           1.       A method of generating a plurality of custom catalogs from a database  
2 comprising catalog data, said method comprising:  
3           executing a search of the database for each of a plurality of rule sets, each of the rule  
4           sets specifying constraints that define a scope of the catalog data comprising  
5           one of the custom catalogs, and each of the rule sets uniquely identified by a  
6           rule set identifier, said executing a search performed in accordance with  
7           constraints specified by the rule set and returning a set of search results in the  
8           form of a subset of the catalog data having the scope defined by the  
9           constraints; and  
10          associating each set of search results with the identifier of the rule set used to generate  
11          them.

1           2.       The method of Claim 1 further comprising responding to a database query, the  
2 query specifying constraints defining a scope of the catalog data and being associated with a  
3 rule set identifier, said responding further comprising:  
4           executing a search of the database in accordance with the query constraints, the search  
5           returning a set of query results in the form of a subset of the catalog data  
6           having the scope defined by the query constraints; and  
7           generating a response to the query that comprises a pared subset of the catalog data  
8           that forms the intersection between the set of query results and the set of  
9           search results associated with the same rule set identifier as associated with the  
10          query.

1           3.       The method of Claim 2 further comprising receiving the query from a browser  
2 over the Internet.

1           4.       The method of Claim 3 wherein said generating a response to the query further  
2 comprises:  
3           formatting the pared subset of catalog data as one or more web pages; and

transmitting the web pages over the Internet for display on the browser.

5. The method of Claim 1 wherein the catalog data represents a plurality of items, the catalog data for each of the items comprising a unique item identifier, one or more attributes, a unique value for each of the attributes, and associated descriptive information.

6. The method of claim 5 wherein each set of search results comprises none, one or more item identifiers, and wherein said associating further comprises:  
for each set of search results,  
creating an entry in a subset table for each instance of the one or more item identifiers in the set; and  
storing in each entry the item identifier and the identifier of the rule set used to constrain the search that generated the set.

7. The method of Claim 6 further comprising responding to a database query, the query specifying constraints defining a scope of the catalog data and being associated with a rule set identifier, said responding further comprising:  
executing a search of the database in accordance with the query constraints, the search returning a set of query results in the form of a subset of the catalog data having the scope defined by the query constraints, the query results comprising none, one or more item identifiers;  
creating a query results table having an entry for each item identifier in the set of query results, each entry storing the item identifier with the rule set identifier associated with the query;  
performing a table join between the query results table and the subset table and returning a pared subset comprising all item identifiers that have identical entries in both tables; and  
generating a response to the query that includes descriptive information associated with each of the item identifiers included in the pared subset.

8. The method of Claim 1 further comprising storing each of one or more sets of search results in a different catalog subset table, each catalog subset table associated with the

3 identifier of the rule set constraining the search used to generate the set of results stored  
4 therein.

1 9. The method of Claim 8 wherein the catalog data represents a plurality of  
2 items, the catalog data for each of the items comprising a unique item identifier, one or more  
3 attributes, a unique value for each of the attributes, and associated descriptive information.

1 10. The method of Claim 9 wherein each of the catalog subset tables comprises  
2 one or more item identifiers for each of the items included in the set of search results stored  
3 in each table, said method further comprising for each catalog subset table, extracting the  
4 catalog data for each of the item identifiers stored therein to create a custom catalog file.

1 11. The method of Claim 10 further comprising:  
2 formatting one or more copies of the custom catalog files; and  
3 exporting each formatted copy to an entity associated with the same identifier as the  
4 identifier associated with the rule set constraining the search used to generate  
5 the search results used to extract the catalog data comprising the formatted  
6 copy to be exported.

1 12. The method of Claim 1 further comprising:  
2 locking the database so that no modifications can be made to the database during said  
3 executing searches.  
4 creating a read-only copy of the database; and  
5 wherein said executing a search is performed on the read-only copy of the database.

1 13. The method of Claim 12 wherein said creating a read only copy of the  
2 database further comprises converting the database from format that facilitates database  
3 maintenance to a read-only version of the database having a format that facilitates searches.

1 14. The method of Claim 1 wherein said executing a search further comprises:  
2 translating the rule sets to database queries;  
3 issuing the database queries to a database server coupled to the database; and

4 wherein the database server executes the searches of the database in accordance with  
5 the database queries.

1 15. The method of Claim 14 wherein said converting the rule sets to database  
2 queries is performed by an application program being executed on an application server.

1 16. The method of Claim 1 wherein the rule sets comprise one or more rules, each  
2 of the rules specifying an include or an exclude function in conjunction with one or more  
3 item attribute pairs.

1 17. The method of Claim 1 further comprising establishing the plurality of rule  
2 sets using a browser interface to an application program being executed on an application  
3 server.

1 18. An apparatus for generating a plurality of custom catalogs from a database  
2 comprising catalog data, said apparatus comprising:

3 means for executing a search of the database for each of a plurality of rule sets, each  
4 of the rule sets specifying constraints that define a scope of the catalog data  
5 comprising one of the custom catalogs, and each of the rule sets uniquely  
6 identified by a rule set identifier, said executing a search performed in  
7 accordance with constraints specified by the rule set and returning a set of  
8 search results in the form of a subset of the catalog data having the scope  
9 defined by the constraints; and

10 means for associating each set of search results with the identifier of the rule set used  
11 to generate them.

1 19. The apparatus of Claim 18 further comprising means for responding to a  
2 database query, the query specifying constraints defining a scope of the catalog data and  
3 being associated with a rule set identifier, said means for responding further comprising:

4 means for executing a search of the database in accordance with the query constraints,  
5 the search returning a set of query results in the form of a subset of the catalog  
6 data having the scope defined by the query constraints; and

7 means for generating a response to the query that comprises a pared subset of the  
8 catalog data that forms the intersection between the set of query results and the  
9 set of search results associated with the same rule set identifier as associated  
10 with the query.

1 20. The apparatus of Claim 19 further comprising receiving the query from a  
2 browser over the Internet.

1 21. The apparatus of Claim 20 wherein said means for generating a response to  
2 the query further comprises:

3 means for formatting the pared subset of catalog data as one or more web pages; and  
4 means for transmitting the web pages over the Internet for display on the browser.

5 22. The apparatus of Claim 18 wherein the catalog data represents a plurality of  
6 items, the catalog data for each of the items comprising a unique item identifier, one or more  
7 attributes, a unique value for each of the attributes, and associated descriptive information.

1 23. The apparatus of claim 22 wherein each set of search results comprises none,  
2 one or more item identifiers, and wherein said means for associating further comprises:

3 means for creating for each set of search results an entry in a subset table for each  
4 instance of the one or more item identifiers in the set; and  
5 means for storing in each entry the item identifier and the identifier of the rule set  
6 used to constrain the search that generated the set, for each set of search  
7 results.

1 24. The apparatus of Claim 23 further comprising means for responding to a  
2 database query, the query specifying constraints defining a scope of the catalog data and  
3 being associated with a rule set identifier, said means for responding further comprising:

4 means for executing a search of the database in accordance with the query constraints,  
5 the search returning a set of query results in the form of a subset of the catalog  
6 data having the scope defined by the query constraints, the query results  
7 comprising none, one or more item identifiers;

8 means for creating a query results table having an entry for each item identifier in the  
9 set of query results, each entry storing the item identifier with the same rule  
10 set identifier as associated with the query;  
11 means for performing a table join between the query results table and the subset table  
12 and returning a pared subset comprising all item identifiers that have identical  
13 entries in both tables; and  
14 means for generating a response to the query that includes descriptive information  
15 associated with each of the item identifiers included in the pared subset.

1 25. The apparatus of Claim 18 further comprising means for storing each of one or  
2 more sets of search results in a different catalog subset table, each catalog subset table  
3 associated with the identifier of the rule set constraining the search used to generate the set of  
4 results stored therein.

1 26. The apparatus of Claim 25 wherein the catalog data represents a plurality of  
2 items, the catalog data for each of the items comprising a unique item identifier, one or more  
3 attributes, a unique value for each of the attributes, and associated descriptive information.

1 27. The apparatus of Claim 26 wherein each of the catalog subset tables comprises  
2 one or more item identifiers for each of the items included in the set of search results stored  
3 in each table, said apparatus further comprising, means for extracting for each catalog subset  
4 table the catalog data for each of the item identifiers stored therein to create a custom catalog  
5 file.

1 28. The apparatus of Claim 27 further comprising:  
2 means for formatting one or more copies of the custom catalog files; and  
3 means for exporting each formatted copy to an entity associated with the same  
4 identifier as the identifier associated with the rule set constraining the search  
5 used to generate the search results used to extract the catalog data comprising  
6 the formatted copy to be exported.

1           29.     The apparatus of Claim 18 further comprising:  
2           means for locking the database so that no modifications can be made to the database  
3                   during said executing searches.  
4           means for creating a read-only copy of the database; and  
5           wherein said means for executing searches operates on the read-only copy of the  
6                   database.

1           30.     The apparatus of Claim 19 wherein said means for creating a read only copy  
2           of the database further comprises means for converting the database from format that  
3           facilitates database maintenance to a read-only version of the database having a format that  
4           facilitates searches.

1           31.     The apparatus of Claim 18 wherein said means for executing a search further  
2           comprises:  
3                   means for translating the rule sets to database queries;  
4                   means for issuing the database queries to a database server coupled to the database;  
5                   and  
6                   wherein the database server executes the searches of the database in accordance with  
7                   the database queries.

1           32.     The apparatus of Claim 31 wherein said means for converting the rule sets to  
2           database queries is performed by an application program being executed on an application  
3           server.

1           33.     The apparatus of Claim 18 wherein the rule sets comprise one or more rules,  
2           each of the rules specifying an include or an exclude function in conjunction with one or  
3           more item attribute pairs.

1           34.     The apparatus of Claim 18 further comprising means for establishing the  
2           plurality of rule sets using a browser interface to an application program being executed on  
3           an application server.

1           35.     A computer program product for generating a plurality of custom catalogs  
2 from a database comprising catalog data, said computer program product comprising:  
3           a computer-readable storage medium; and  
4           program instructions stored on said storage medium for:  
5           executing a search of the database for each of a plurality of rule sets, each of the rule  
6           sets specifying constraints that define a scope of the catalog data comprising  
7           one of the custom catalogs, and each of the rule sets uniquely identified by a  
8           rule set identifier, said executing a search performed in accordance with  
9           constraints specified by the rule set and returning a set of search results in the  
10          form of a subset of the catalog data having the scope defined by the  
11          constraints; and  
12          associating each set of search results with the identifier of the rule set used to generate  
13          them.

1           36.     The computer program product of Claim 35 wherein said program instructions  
2 are further for responding to a database query, the query specifying constraints defining a  
3 scope of the catalog data and being associated with rule set identifier, said program  
4 instructions further for:  
5           executing a search of the database in accordance with the query constraints, the search  
6           returning a set of query results in the form of a subset of the catalog data  
7           having the scope defined by the query constraints; and  
8           generating a response to the query that comprises a pared subset of the catalog data  
9           that forms the intersection between the set of query results and the set of  
10          search results associated with the same rule set identifier as associated with the  
11          query.

1           37.     The computer program product of Claim 36 wherein said program instructions  
2 are further for receiving the query from a browser over the Internet.

1           38.     The computer program product of Claim 37 wherein said program instructions  
2 are further for:  
3           formatting the pared subset of catalog data as one or more web pages; and



transmitting the web pages over the Internet for display on the browser.

39. The computer program product of Claim 35 wherein the catalog data represents a plurality of items, the catalog data for each of the items comprising a unique item identifier, one or more attributes, a unique value for each of the attributes, and associated descriptive information.

40. The computer program product of claim 39 wherein each set of search results comprises none, one or more item identifiers, wherein said program instructions are further for:

for each set of search results,  
creating an entry in a subset table for each instance of the one or more item identifiers in the set; and  
storing in each entry the item identifier and the identifier of the rule set used to constrain the search that generated the set.

41. The computer program product of Claim 40 wherein said program instructions are further for responding to a database query, the query specifying constraints defining a scope of the catalog data and being associated with a rule set identifier, said program instructions further for:

executing a search of the database in accordance with the query constraints, the search returning a set of query results in the form of a subset of the catalog data having the scope defined by the query constraints, the query results comprising none, one or more item identifiers;  
creating a query results table having an entry for each item identifier in the set of query results, each entry storing the item identifier with the same rule set identifier as associated with the query;  
performing a table join between the query results table and the subset table and returning a pared subset comprising all item identifiers that have identical entries in both tables; and  
generating a response to the query that includes descriptive information associated with each of the item identifiers included in the pared subset.

1           42.     The computer program product of Claim 35 wherein said program instructions  
2 are further for storing each of one or more sets of search results in a different catalog subset  
3 table, each catalog subset table associated with the identifier of the rule set constraining the  
4 search used to generate the set of results stored therein.

1           43.     The computer program product of Claim 42 wherein the catalog data  
2 represents a plurality of items, the catalog data for each of the items comprising a unique item  
3 identifier, one or more attributes, a unique value for each of the attributes, and associated  
4 descriptive information.

1           44.     The computer program product of Claim 43 wherein each of the catalog subset  
2 tables comprises one or more item identifiers for each of the items included in the set of  
3 search results stored in each table, and wherein said program instructions are further for:  
4                 extracting, for each catalog subset table, the catalog data for each of the item  
5                 identifiers stored therein to create a custom catalog file.

1           45.     The computer program product of Claim 44 wherein said program  
2 instructions are further for:  
3                 formatting one or more copies of the custom catalog files; and  
4                 exporting each formatted copy to an entity associated with the same identifier as the  
5                 identifier associated with the rule set constraining the search used to generate  
6                 the search results used to extract the catalog data comprising the formatted  
7                 copy to be exported.

1           46.     The computer program product of Claim 35 wherein said program  
2 instructions are further for:  
3                 locking the database so that no modifications can be made to the database during said  
4                 executing searches.  
5                 creating a read-only copy of the database; and  
6                 wherein said executing searches is performed on the read-only copy of the database.

1           47.     The computer program product of Claim 46 wherein said program instructions  
2 are further for converting the database from a format that facilitates database maintenance to  
3 a read-only version of the database having a format that facilitates searches.

1           48.     The computer program product of Claim 35 wherein said program  
2 instructions are further for:  
3           translating the rule sets to database queries;  
4           issuing the database queries to a database server coupled to the database; and  
5           wherein the database server executes the searches of the database in accordance with  
6           the database queries.

1           49.     The computer program product of Claim 48 wherein said program instructions  
2 comprise an application program being executed on an application server.

1           50.     The computer program product of Claim 35 wherein the rule sets comprise  
2 one or more rules, each of the rules specifying an include or an exclude function in  
3 conjunction with one or more item attribute pairs.

1           51.     A custom catalog generated from a database comprising catalog data, said  
2 custom catalog generated by:  
3           executing a search of the database for each of a plurality of rule sets, each of the rule  
4           sets specifying constraints that define a scope of the catalog data comprising  
5           one of the custom catalogs, and each of the rule sets uniquely identified by a  
6           rule set identifier, said executing a search performed in accordance with  
7           constraints specified by the rule set and returning a set of search results in the  
8           form of a subset of the catalog data having the scope defined by the  
9           constraints; and  
10          associating the set of search results with the identifier of the rule set.

1           52.     The custom catalog of Claim 50 further generated by responding to a database  
2 query, the query specifying constraints defining a scope of the catalog data and being  
3 associated with a rule set identifier, said custom catalog further generated by:

4           executing a search of the database in accordance with the query constraints, the search  
5           returning a set of query results in the form of a subset of the catalog data  
6           having the scope defined by the query constraints; and  
7           generating a response to the query that comprises a pared subset of the catalog data  
8           forming the intersection between the set of query results and the set of search  
9           results.

1           53.     The custom catalog of Claim 52 further generated by receiving the query from  
2 a browser over the Internet.

1           54.     The custom catalog of Claim 53 further generated by:  
2           formatting the pared subset of catalog data as one or more web pages; and  
3           transmitting the web pages over the Internet for display on the browser.

1           55.     The custom catalog of Claim 51 wherein the catalog data represents a plurality  
2 of items, the catalog data for each of the items comprising a unique item identifier, one or  
3 more attributes, a unique value for each of the attributes, and associated descriptive  
4 information.

1           56.     The custom catalog of claim 55 wherein the set of search results comprises  
2 none, one or more item identifiers, and wherein said custom catalog is further generated by:  
3           creating an entry in a subset table for each instance of the one or more item identifiers  
4           in the set; and  
5           storing in each entry the item identifier and the identifier of the rule set.

1           57.     The custom catalog of Claim 56 further generated by responding to a database  
2 query, the query specifying constraints defining a scope of the catalog data and being  
3 associated with a rule set identifier, said custom catalog further generated by:

4           executing a search of the database in accordance with the query constraints, the search  
5           returning a set of query results in the form of a subset of the catalog data  
6           having the scope defined by the query constraints, the query results  
7           comprising none, one or more item identifiers;

8           creating a query results table having an entry for each item identifier in the set of  
9           query results, each entry storing the item identifier with the rule set identifier  
10          associated with the query;

11          performing a table join between the query results table and the subset table and  
12          returning a pared subset comprising all item identifiers that have identical  
13          entries in both tables; and

14          generating a response to the query that includes descriptive information associated  
15          with each of the item identifiers included in the pared subset.

1           58.     The custom catalog of Claim 51 further generated by storing the set of search  
2 results in a catalog subset table, each catalog subset table associated with the identifier.

1           59.     The custom catalog of Claim 58 wherein the catalog data represents a plurality  
2 of items, the catalog data for each of the items comprising a unique item identifier, one or  
3 more attributes, a unique value for each of the attributes, and associated descriptive  
4 information.

1           60.     The custom catalog of Claim 59 wherein the catalog subset table comprises  
2 one or more item identifiers for each of the items included in the set of search results stored  
3 in the table, said custom catalog further generated by extracting the catalog data for each of  
4 the item identifiers stored therein to create a custom catalog file.

1           61.     The custom catalog of Claim 60 further generated by:  
2           formatting one or more copies of the custom catalog file; and

3 exporting each formatted copy to an entity associated with the identifier of the rule  
4 set.

1 62. The custom catalog of Claim 51 further generated by:  
2 locking the database so that no modifications can be made to the database during said  
3 executing searches.  
4 creating a read-only copy of the database; and  
5 wherein said executing searches is performed on the read-only copy of the database.

1 63. The custom catalog of Claim 62 further generated by converting the database  
2 from a format that facilitates database maintenance to a read-only version of the database  
3 having a format that facilitates searches.

1 64. The custom catalog of Claim 51 further generated by:  
2 translating the rule set to one or more database queries;  
3 issuing the database queries to a database server coupled to the database; and  
4 wherein the database server executes the search of the database in accordance with the  
5 database queries.

1 65. The custom catalog of Claim 64 wherein said custom catalog is generated by  
2 an application program being executed on an application server.

1 66. The custom catalog of Claim 51 wherein the rule sets comprise one or more  
2 rules, each of the rules specifying an include or an exclude function in conjunction with one  
3 or more item attribute pairs.

1 67. The custom catalog of Claim 51 further generated by using a browser interface  
2 to an application program being executed on an application server to establish a plurality of  
3 rule sets.

1 68. A method of interacting with a graphical user interface to establish a plurality  
2 of custom catalogs from a database comprising catalog data, said method comprising:  
3 establishing a plurality of rule sets, each of the rule sets specifying constraints that  
4 define a scope of the catalog data comprising one of the custom catalogs;

5 identifying each of the rule sets by a rule set identifier, said rule sets for executing a  
6 search performed in accordance with constraints specified by the rule set and  
7 returning a set of search results in the form of a subset of the catalog data  
8 having the scope defined by the constraints; and  
9 associating a rule set with one or more entities using the rule set identifier.

1 69. The method of Claim 68 wherein said establishing, said identifying and said  
2 associating, is performed using a browser interface to an application program being executed  
3 on an application server.

1 70. The method of Claim 69 wherein said browser is coupled to the application  
2 server through the Internet and a web server.